

# PATENT ABSTRACTS OF JAPAN

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(21)Application number : 08-217150 (71)Applicant : NEC HOME ELECTRON LTD

(22)Date of filing : 19.08.1996 (72)Inventor : HARUHARA HIDEKI

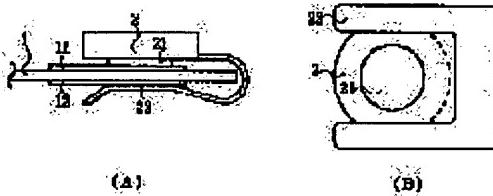
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## (54) BATTERY-MOUNTING STRUCTURE

### (57)Abstract:

PROBLEM TO BE SOLVED: To provide a clip battery in which the battery can be securely and easily mounted, replaced, and maintained.

SOLUTION: A printed circuit board 1 is inserted between the first lead 21 and the second lead 22, the first lead 21 where the negative electrode of a main body 2 is connected is made to contact a conductive pattern 11, and the second lead 22 where the positive electrode of the main body 2 is connected is made to contact a conductive pattern 12 by holding the board 1 at the center. Consequently, a battery can be held easily by nipping the board 1, by utilizing the elastic force of the second lead 22 fully to its maximum.



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### LEGAL STATUS

[Date of request for examination]

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**CLAIMS**

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**[Claim(s)]**

[Claim 1] The printed circuit board which equipped both sides with the electric conduction pattern, and the 1st lead with which the end was contacted by one electric conduction pattern of this printed circuit board, An end is connected to the positive electrode/negative electrode of the body by which the negative electrode/positive electrode was connected to the other end of this 1st lead, and this body. And cell mounting structure characterized by consisting of cells which have the 2nd lead of U typeface equipped with the resiliency which the other end puts the above-mentioned printed circuit board, and contacts the above-mentioned electric conduction pattern of another side.

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**DETAILED DESCRIPTION**

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**[Detailed Description of the Invention]****[0001]**

[Field of the Invention] This invention relates to cell mounting structure, and relates to the cell mounting structure of mounting the cell for backup of a storage element in a printed circuit board especially.

**[0002]**

[Description of the Prior Art] Since the conventional cell mounting structure had soldered the cell on the printed circuit board, When the workability of exchange maintenance when a cell function is spoiled is bad or uses a holder, as shown in (A) of drawing 3 As it is indicated in (B) of drawing 3 as what fixes the holder 203 of a cell 202 to a printed circuit board 201 with adhesives 204 In order for there to be some which fit in to the hole 211 which was able to open in the printed circuit board 201 the holder 205 which formed the pawl 251, and are fixed to it, and for the fabrication operation of a printed circuit board 201 to take time amount by using another components and to open a hole 211 in a printed circuit board 201, the detour of an electric conduction pattern is needed.

**[0003]**

[Problem(s) to be Solved by the Invention] Therefore, the conventional cell mounting structure removed solder, although a cell 202 is removed from a printed circuit board 201, and it had the technical problem that adhesives 204 must be used since a cell 202 is fixed, or the holder 205 which has the configuration of a pawl 251 had to be used.

**[0004]** Then, the purpose of this invention is to offer the cell mounting structure of ensuring a cell easily mounting and exchange maintenance.

**[0005]**

[Means for Solving the Problem] In order to solve an above-mentioned technical problem, the cell mounting structure of this invention The printed circuit board which equipped both sides with the electric conduction pattern, and the 1st lead with which the end was contacted by one electric conduction pattern of this printed circuit board, It is characterized by consisting of cells which have the 2nd lead of U typeface equipped with the resiliency which an end is connected to the positive electrode/negative electrode of the body by which the negative electrode/positive electrode was connected to the other end of this 1st lead, and this body, and the other end puts the above-mentioned printed circuit board, and contacts the above-mentioned electric conduction pattern of another side.

**[0006]**

[Embodiment of the Invention] Next, the cell mounting structure by the gestalt of the 1st operation of this invention is explained with reference to a drawing.

**[0007]** Drawing 1 is the side elevation (A) and bottom view (B) of cell mounting structure by the gestalt of the 1st operation of this invention.

**[0008]** The cell mounting structure by the gestalt of the 1st operation of this invention The printed

circuit board 1 which equipped both sides with the electric conduction patterns 11 and 12 as shown in drawing 1, The 1st lead 21 with which the end was contacted by one electric conduction pattern 11 of this printed circuit board 1, It consists of cells which have the 2nd lead 22 of U typeface equipped with the resiliency which an end is connected to the positive electrode of the body 2 by which the negative electrode was connected to the other end of this 1st lead 21, and this body 2, and the other end puts a printed circuit board 1, and contacts the electric conduction pattern 12 of another side.

[0009] Next, actuation of the cell mounting structure by the gestalt of the 1st operation of this invention is explained with reference to a drawing.

[0010] Actuation of the cell mounting structure by the gestalt of the 1st operation of this invention As shown in drawing 1, a printed circuit board 1 is inserted between the 1st lead 21 and the 2nd lead 22. The 1st lead 21 to which the negative electrode of a body 2 was connected to the electric conduction pattern 11 is contacted. And in the 2nd lead 22 to which the positive electrode of a body 2 was connected, a printed circuit board 1 is put, the electric conduction pattern 12 is contacted, a printed circuit board 1 is put between the maximum taking advantage of the resiliency of this 2nd lead 22, and a cell is held easily.

[0011] Moreover, a short circuit can be prevented, before equipping a printed circuit board 1 with a cell by shifting a location so that the 1st lead 21 and the 2nd lead 22 may not contact mutually.

[0012] Next, the cell mounting structure by the gestalt of the 2nd operation of this invention is explained with reference to a drawing.

[0013] Drawing 2 is the side elevation (A) and bottom view (B) of cell mounting structure by the gestalt of the 2nd operation of this invention.

[0014] The cell mounting structure by the gestalt of the 2nd operation of this invention The printed circuit board 101 which equipped one side with the electric conduction patterns 12A and 12B as shown in drawing 2, The 1st lead 121 of U typeface equipped with the resiliency for which this printed circuit board 101 was put and the end was contacted by one electric conduction pattern 12A, It consists of cells which have the 2nd lead 122 of U typeface equipped with the resiliency which an end is connected to the positive electrode of the body 102 by which the negative electrode was connected to the other end of this 1st lead 121, and this body 102, and the other end puts a printed circuit board 101, and contacts electric conduction pattern 12B of another side.

[0015] Next, actuation of the cell mounting structure by the gestalt of the 2nd operation of this invention is explained with reference to a drawing.

[0016] Actuation of the cell mounting structure by the gestalt of the 2nd operation of this invention As shown in drawing 2, a printed circuit board 101 is inserted between a body 102, and the 1st lead 121 and the 2nd lead 122. The 1st lead 121 to which the negative electrode of a body 102 was connected to electric conduction pattern 12A is contacted. And electric conduction pattern 12B is contacted [ lead / to which positive electrode of body 102 was connected / 122 / 2nd ] in a printed circuit board 1, a printed circuit board 1 is put between the maximum taking advantage of the resiliency of this 1st lead 121 and the 2nd lead 122, and a cell is held easily.

[0017]

[Effect of the Invention] As explained above, when it fixes the backup cell for the contents preservation of storage of electronic equipment and a computer machine to a printed circuit board according to the cell mounting structure of this invention, it is effective in the ability to secure a flow certainly and hold a cell to a printed circuit board according to a spring operation of an electrode section, by putting the printed circuit board by the cell.

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**TECHNICAL FIELD**

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[Field of the Invention] This invention relates to cell mounting structure, and relates to the cell mounting structure of mounting the cell for backup of a storage element in a printed circuit board especially.

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**PRIOR ART**

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[Description of the Prior Art] Since the conventional cell mounting structure had soldered the cell on the printed circuit board, When the workability of exchange maintenance when a cell function is spoiled is bad or uses a holder, as shown in (A) of drawing 3. As it is indicated in (B) of drawing 3 as what fixes the holder 203 of a cell 202 to a printed circuit board 201 with adhesives 204. In order for there to be some which fit in to the hole 211 which was able to open in the printed circuit board 201 the holder 205 which formed the pawl 251, and are fixed to it, and for the fabrication operation of a printed circuit board 201 to take time amount by using another components and to open a hole 211 in a printed circuit board 201, the detour of an electric conduction pattern is needed.

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**EFFECT OF THE INVENTION**

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[Effect of the Invention] As explained above, when it fixes the backup cell for the contents preservation of storage of electronic equipment and a computer machine to a printed circuit board according to the cell mounting structure of this invention, it is effective in the ability to secure a flow certainly and hold a cell to a printed circuit board according to a spring operation of an electrode section, by putting the printed circuit board by the cell.

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**TECHNICAL PROBLEM**

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[Problem(s) to be Solved by the Invention] Therefore, the conventional cell mounting structure removed solder, although a cell 202 is removed from a printed circuit board 201, and it had the technical problem that adhesives 204 must be used since a cell 202 is fixed, or the holder 205 which has the configuration of a pawl 251 had to be used.

[0004] Then, the purpose of this invention is to offer the cell mounting structure of ensuring a cell easily mounting and exchange maintenance.

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**MEANS**

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[Means for Solving the Problem] In order to solve an above-mentioned technical problem, the cell mounting structure of this invention The printed circuit board which equipped both sides with the electric conduction pattern, and the 1st lead with which the end was contacted by one electric conduction pattern of this printed circuit board, It is characterized by consisting of cells which have the 2nd lead of U typeface equipped with the resiliency which an end is connected to the positive electrode/negative electrode of the body by which the negative electrode/positive electrode was connected to the other end of this 1st lead, and this body, and the other end puts the above-mentioned printed circuit board, and contacts the above-mentioned electric conduction pattern of another side.

[0006]

[Embodiment of the Invention] Next, the cell mounting structure by the gestalt of the 1st operation of this invention is explained with reference to a drawing.

[0007] Drawing 1 is the side elevation (A) and bottom view (B) of cell mounting structure by the gestalt of the 1st operation of this invention.

[0008] The cell mounting structure by the gestalt of the 1st operation of this invention The printed circuit board 1 which equipped both sides with the electric conduction patterns 11 and 12 as shown in drawing 1, The 1st lead 21 with which the end was contacted by one electric conduction pattern 11 of this printed circuit board 1, It consists of cells which have the 2nd lead 22 of U typeface equipped with the resiliency which an end is connected to the positive electrode of the body 2 by which the negative electrode was connected to the other end of this 1st lead 21, and this body 2, and the other end puts a printed circuit board 1, and contacts the electric conduction pattern 12 of another side.

[0009] Next, actuation of the cell mounting structure by the gestalt of the 1st operation of this invention is explained with reference to a drawing.

[0010] Actuation of the cell mounting structure by the gestalt of the 1st operation of this invention As shown in drawing 1, a printed circuit board 1 is inserted between the 1st lead 21 and the 2nd lead 22. The 1st lead 21 to which the negative electrode of a body 2 was connected to the electric conduction pattern 11 is contacted. And in the 2nd lead 22 to which the positive electrode of a body 2 was connected, a printed circuit board 1 is put, the electric conduction pattern 12 is contacted, a printed circuit board 1 is put between the maximum taking advantage of the resiliency of this 2nd lead 22, and a cell is held easily.

[0011] Moreover, a short circuit can be prevented, before equipping a printed circuit board 1 with a cell by shifting a location so that the 1st lead 21 and the 2nd lead 22 may not contact mutually.

[0012] Next, the cell mounting structure by the gestalt of the 2nd operation of this invention is explained with reference to a drawing.

[0013] Drawing 2 is the side elevation (A) and bottom view (B) of cell mounting structure by the gestalt of the 2nd operation of this invention.

[0014] The cell mounting structure by the gestalt of the 2nd operation of this invention The printed circuit board 101 which equipped one side with the electric conduction patterns 12A and 12B as shown in drawing 2 , The 1st lead 121 of U typeface equipped with the resiliency for which this printed circuit board 101 was put and the end was contacted by one electric conduction pattern 12A, It consists of cells which have the 2nd lead 122 of U typeface equipped with the resiliency which an end is connected to the positive electrode of the body 102 by which the negative electrode was connected to the other end of this 1st lead 121, and this body 102, and the other end puts a printed circuit board 101, and contacts electric conduction pattern 12B of another side.

[0015] Next, actuation of the cell mounting structure by the gestalt of the 2nd operation of this invention is explained with reference to a drawing.

[0016] Actuation of the cell mounting structure by the gestalt of the 2nd operation of this invention As shown in drawing 2 , a printed circuit board 101 is inserted between a body 102, and the 1st lead 121 and the 2nd lead 122. The 1st lead 121 to which the negative electrode of a body 102 was connected to electric conduction pattern 12A is contacted. And electric conduction pattern 12B is contacted [ lead / to which positive electrode of body 102 was connected / 122 / 2nd ] in a printed circuit board 1, a printed circuit board 1 is put between the maximum taking advantage of the resiliency of this 1st lead 121 and the 2nd lead 122, and a cell is held easily.

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**DESCRIPTION OF DRAWINGS**

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[Brief Description of the Drawings]

[Drawing 1] It is the side elevation (A) and bottom view (B) of cell mounting structure by the gestalt of the 1st operation of this invention.

[Drawing 2] It is the side elevation (A) and bottom view (B) of cell mounting structure by the gestalt of the 2nd operation of this invention.

[Drawing 3] They are the example of adhesives use of the conventional cell mounting structure (A), and an example of fitting pawl use (B).

[Description of Notations]

1,101 Printed circuit board

2,102 Body

11, 12, 12A, 12B Electric conduction pattern

21,121 The 1st lead

22,122 The 2nd lead

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[Translation done.]

**\* NOTICES \***

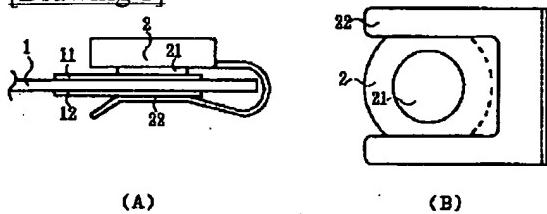
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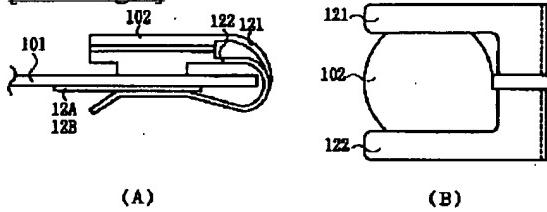
**DRAWINGS**

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**[Drawing 1]**

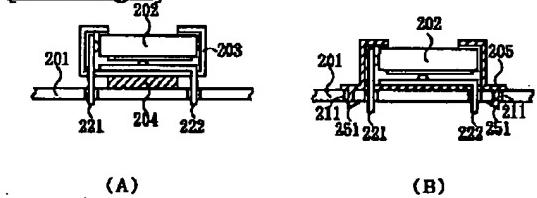
(A)

(B)

**[Drawing 2]**

(A)

(B)

**[Drawing 3]**

(A)

(B)

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[Translation done.]